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as comfortable as possible and taken off as soon as consistent with safety.

In the feeding and care of the insane infinite pains, tact, faithfulness, and patience are needed. No nurse should undertake such care with the anticipation of success unless she is willing to give these in full measure. If she does bring such qualities to the work, success is assured, and she will earn the gratitude of patients, friends, and the physician for whom she nurses.

MOUTH-BREATHING—ITS INJURIOUS EFFECTS

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THERE is no perverted function attended with so many ill effects, and none persisted in so continuously and with as little concern, as that of mouth-breathing. In proof that man was intended to be a nose-breather we might cite the authority of divine writ, when it says, "The Lord breathed into his nostrils the breath of life," which shows that the ancient Jews had a proper conception of the nose as a divinely appointed organ of breathing.

The scientific proof that man was intended to be a nose-breather is deduced not only from the ill-effects resulting from mouth-breathing, but also from the important physiological functions that the nose performs in the animal economy.

The four principal functions performed by the nose are that of smelling; that of filtering or separating from the air we breathe foreign substances; that of imparting moisture to, and that of modifying the temperature of, the respired air.

The sense of smell performs a most important physiological function in protecting us from the poisonous emanations that contaminate the air. Without the sense of smell, the absence of which in our cities might frequently be regarded as desirable, we might unconsciously fail to be warned against unsanitary conditions, such as the escape of illuminating gas in our rooms, coal gas from our furnaces, noxious gases from our sewers, all of which are deadly poisons, as illustrated by the frequent deaths from such causes. Thus when the sense of smell is destroyed by diseased conditions, or the nasal passages are obstructed, we not only

lose the protection which this sense gives us, but we are denied the pleasures of delightful odors as well as the savory flavors of our foods and wines, which contribute much to the happiness of life and thus indirectly to the health of the individual.

The part that the nose performs in straining the air of dust, germs, and other foreign substances is a very important one, for air, containing, as it does, germs in large quantities, is freed from them when it reaches the windpipe, while the front part, the vestibule of the nose, is found swarming with these germs that have been arrested there. The importance of this is further shown by the fact that there is contained in the amount of ordinary air in our densely populated cities inhaled during one hour from fifteen hundred to fourteen thousand germs, and also by the fact that this air after passing through a normal nose and reaching the lungs is entirely freed from these germs. The office of the nose in filtering the air, and thus excluding dust and other foreign substances from the lungs, is consequently of the greatest importance in the prevention of pulmonary diseases.

The imparting of moisture to the air, when too dry for respiration, is also a very important function of the nose. The irritating effect on the throat and lungs of too dry an atmosphere is generally understood, and for this reason various devices are in use for imparting moisture to the furnace-dried atmosphere of our houses. Persons who breathe through the mouth, however, suffer from irritation of the throat and lungs from this cause in a much greater degree than nose-breathers. This is accounted for by the fact that in a dry atmosphere during each twenty-four hours about five thousand grains of water, or over ten ounces, are by the vascular tissues of a normal nose imparted to the air that passes through it on its way to the respiratory organs below. This supply of water given out by the nose is, however, regulated by the vasomotor or sympathetic nerves so as to meet the requirements in different cases, since the supply is varied according to the different degrees of humidity of the atmosphere, and also according to the readiness with which the nasal supply itself is taken up by the air as it passes through the nose.

Moreover, the temperature of the inspired air is modified, so that by the time it reaches the lungs, no matter how extreme the heat or cold of the atmosphere may be, it is brought to a healthful temperature for inhalation. We can, therefore, very readily understand the ill effects that sooner or later must be caused by mouth-breathing, in consequence of which we fail to obtain the benefit of the physiological functions that the nose performs. With the substitution of oral for the normal nasal respiration the air we breathe has no filter with which to free it from

dust and germs, nor is the air modified by having moisture and warmth imparted to it. As a result of mouth-breathing the throat becomes dry and irritable, the larynx irritated, attended with hoarseness and cough; the person is made more susceptible to colds, and a general catarrh of the throat and bronchial tubes and often asthma are caused thereby. Nor does it stop here. The deeper air passages and lungs thus irritated and diseased become an excellent feeding-ground for the consumption germ, and consumption is but the natural and frequent termination of this condition.

Mouth-breathing, therefore, may be regarded as one of the principal predisposing causes of consumption, while nose-breathing is the natural safeguard for its prevention. In children, and in adults too, various spasmodic affections of the larynx are induced by this long-continued irritation. The distressing and often alarming condition of spasmodic croup, or laryngismus stridulus, coming on during the night is almost invariably the result of mouth-breathing. Persons who breathe through the mouth do not experience the delights of "Nature's sweet restorer, balmy sleep."

Few people who breathe habitually through their mouth during the entire night will admit or believe that they do so or that they snore, because they are convinced that they go to sleep with their mouth closed and instinctively close it on waking; but the fact is, nevertheless, verified by the dry throat, parched tongue, bad taste in the mouth, general lassitude, and lack of the refreshed conditions of the nose-breather. There are none, however, that suffer so much from this perverted function as children. The first inspiration of a new-born babe is through the nostrils, and cases are known of infants suffocating because the nostrils were occluded. Mouth-breathing, therefore, is an acquired habit; and man and his boon companion, the dog, who occasionally tries to imitate his master's example, are the only animals that acquire this habit, the injurious effects of which should be more widely known and guarded against.

It is a singular fact that the North American Indians are more alert to prevent this perversion of a normal function than their civilized brethren. Among the earliest tribes of American Indians it was found that nasal respiration was religiously cultivated from the instant of birth, and the Indian mother watching over her infant, no matter whether asleep or awake, invariably closed the infant's mouth, so that Nature's law might become a fixed habit throughout its life.

The disturbing effect of mouth-breathing during sleep is clearly illustrated by the tossing about of the person or the child at night in the effort of Nature to obtain more air, which is always deficient in amount

in mouth-breathing. From this cause alone much anæmia, debility, neurasthenia, and nervous prostration result.

The injurious effects of mouth-breathing are not only emphasized by the conditions already enumerated, but in children its effect is very apparent in their development. From this lack of air and of oxygen the child's growth is impaired. The chest is imperfectly expanded and prevented from obtaining its normal dimensions, and thereby becomes abnormally contracted. The condition termed "pigeon" or "chicken-breasted" results from this cause. The abnormal physiognomy of the child resulting from its continued open mouth is also very pronounced. Not only does the child acquire a vacant, idiotic expression, but the nose and also the central portion of the face fail properly to develop. The nose thereby not only remains small and contracted, but from lack of use, like an abandoned road overgrown with weeds and bushes, the nasal passages become filled in and obstructed. The end of the nose frequently becomes abnormally enlarged and the condition termed "pug nose" results. It is also observed that the development of the brain is markedly interfered with from its dependence upon the development of the central portion of the face.

The influence of this habit on the teeth is also marked, for during development the constantly closed jaws make them assume a regularity which is rarely seen in mouth-breathing children, but which is a feature to be admired in the Indian, who has the most beautiful mouth in the world.

From the lack of development of the nose the arch of the hard palate, or roof of the mouth, also becomes abnormally high, compelling the incisors, or front teeth, to project unduly, a sign altogether too frequently seen of the parents' neglect to properly attend to the conditions necessitating mouth-breathing during infancy and childhood.

Catlin in his observations of the native races of North America attributes their fine physical development quite as much to their habits of nasal respiration as to their outdoor life. He says, "The Indian warrior sleeps and hunts and smiles with his mouth shut, and with seeming reluctance opens it even to eat or to speak." In summing up his observations on this subject he says, "If I were to bequeath to posterity the most important motto which human language can convey it should be in three words, 'Shut your mouth.'" The truth of this motto cannot be too forcibly impressed upon the minds of all.

